UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,812	09/16/2003	Yang-lim Choi	1293.1916	1080

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EXAMINER
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ART UNIT	PAPER NUMBER
2131	

MAIL DATE	DELIVERY MODE
01/09/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/662,812	CHOI, YANG-IIM
	Examiner	Art Unit	
	Trang Doan	2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 23 October 2007.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 5-12* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 5-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

1.   This action is in response to the amendment filed on 10/23/2007.

2.   Claim 1 has been amended.

3.   Claims 4 and 13-43 have been canceled.

4.   Claims 1-3 and 5-12 are pending for consideration.

Continued Examination Under 37 CFR 1.114

5.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

10/23/2007 has been entered.

Response to Arguments

6.   Applicant's arguments with respect to claims 1-3 and 5-12 have been considered

but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 1-2 and 5-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Medina et al. (US 6959288) (hereinafter Medina in view of Krishnamurthy (US 6823436) (hereinafter Krishnamurthy).

9.   Regarding claim 1, Medina discloses generating a plurality of metadata fragment data by partitioning metadata to be transmitted (Medina: column 31 lines 44-49: metadata comprises parts); selecting a predetermined metadata fragment data from among the plurality of metadata fragment data (Medina: column 16 lines 55-64: metadata (i.e., secure container(s))); generating metadata-related information using the selected metadata fragment data (Medina: column 16 lines 55-64); and transmitting the selected metadata fragment data and the metadata-related information with data format information indicating a type of the selected metadata fragment data (Medina: column 16 lines 55-64).

Medina does not explicitly disclose in detail dividing the metadata based upon a predetermined semantic unit. However, Krishnamurthy discloses dividing the metadata based upon a predetermined semantic unit (Krishnamurthy: see Abstract section: dividing metadata segments into subsegments). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to incorporate the method of dividing the metadata based on predetermined semantic unit of Krishnamurthy into the system of Medina to better utilization of memory resources and of segment metadata nodes in data snapshots in such systems (Krishnamurthy: column 1 lines 8-10).

10.   Regarding claim 2, Medina as modified discloses wherein the selected metadata fragment data, the metadata-related information, and the data format information of the selected metadata fragment data are transmitted in a metadata container (Medina: column 10 lines 4-10).

11.   Regarding claim 5, Medina as modified discloses wherein a metadata authentication level flag specifying a metadata authentication level is further contained in the metadata container (Medina: column 41 lines 24-35 and column 50 lines 32-39).

12.   Regarding claim 6, Medina as modifies discloses wherein the metadata-related information is metadata digest information obtained by substituting the selected metadata fragment data into a unidirectional function (Medina: column 16 lines 55-64).

13.   Regarding claim 7, Medina as modifies discloses wherein the unidirectional function is a hash function (Medina: column 16 lines 55-64).

14.   Regarding claim 8, Medina as modified discloses generating metadata authentication signature information using the metadata-related information and a first encryption key; and inserting the metadata authentication signature information in the metadata container containing the selected metadata fragment data (Medina: column 16 lines 55-64).

15.   Regarding claim 9, Medina as modified discloses wherein the metadata authentication signature information is obtained by substituting the metadata-related information and the first encryption key into a unidirectional function (Medina: column 16 lines 55-64).

16.   Regarding claim 10, Medina as modified discloses encrypting the first encryption key using a second encryption key; and inserting the encrypted first encryption key into the metadata container containing the selected metadata fragment data (Medina: column 12 lines 39-42).

17.   Regarding claim 11, Medina as modified discloses wherein the plurality of metadata fragment data and corresponding metadata-related information are inserted into the metadata container, and each metadata fragment data and the corresponding metadata-related information are connected to each other by pointer information (Medina: column 41 lines 13-19 and lines 55-63).

18.   Regarding claim 12, Medina as modified discloses wherein the plurality of metadata fragment data and corresponding metadata-related information and metadata authentication signature information are inserted into the metadata container, and each metadata fragment data and the corresponding metadata-related information and metadata authentication signature information are connected to one another by pointer information (Medina: column 41 lines 13-19 and lines 55-63).

19.   Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Medina in view of Krishnamurthy, and further in view of Davis et al. (US 7209571) (hereinafter Davis).

20.   Regarding claim 3, Medina in view of Krishnamurthy does not explicitly disclose wherein the data format information indicates whether the selected metadata fragment data has a binary XML format or a text XML format. However, Davis discloses wherein the data format information indicates whether the selected metadata fragment data has

a binary XML format or a text XML format (Davis: column 15 lines 50-52). Therefore, it

would have been obvious to one of ordinary skill in the art at the time the invention to

incorporate the method of providing metadata fragment data has a binary XML format or

a text XML format of Davis into the system of Medina in view of Krishnamurthy to

describe a class of data objects called XML documents and partially describes the

behavior of computer programs which process them (Davis: column 15 lines 52-54).
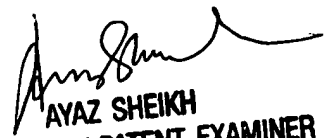
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trang Doan whose telephone number is (571) 272-0740. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Trang Doan
Examiner
Art Unit 2131

T.D.

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